1891MNRAS..51..360M

Ephemeris for Physical Observations of Jupiter, 1891. By A. Marth.

Greenwich Noon		Angle of Position of ♃'s Axis. P	L−O.	Diff.	B	Corr. of log. Δ.	Light-time.	Λ−O.	β	Longitude of ♃'s Central Meridian. (877°·90) I.	Longitude of ♃'s Central Meridian. (870°·27) II.	Corr. for Phase.	Apparent Diameter. Equat.	Apparent Diameter. Phase.	Apparent Diameter. Polar.
1891.		°	°		°		m	°	°	°	°	°	″	″	″
April	17	335·765	203·513	391	+1·005	−165	46·736	194·9068	+0·7930	216·99	32·64	+0·32	34·81	0·20	32·59
	19	·714	203·904	386	1·026	168	46·540	195·0857	·8022	172·52	332·91	·34	34·95	·21	32·73
	21	·665	204·290	380	1·046	171	46·339	195·2646	·8115	128·06	273·19	·36	35·10	·22	32·87
	23	·618	204·670	374	1·067	174	46·133	195·4435	·8207	83·61	213·47	·37	35·26	·23	33·02
	25	·572	205·044	368	1·087	177	45·924	195·6225	·8300	39·16	153·76	·39	35·42	·24	33·17
	27	335·528	205·412	361	+1·108	−179	45·710	195·8015	+0·8392	354·72	94·06	+0·40	35·59	·25	33·32
	29	·486	205·773	354	1·128	182	45·493	195·9805	·8484	310·29	34·37	·42	35·76	·26	33·48
May	1	·445	206·127	348	1·148	184	45·271	196·1596	·8576	265·87	334·69	·43	35·93	·27	33·64
	3	·406	206·475	340	1·168	186	45·046	196·3387	·8669	221·46	275·02	·45	36·11	·28	33·81
	5	·369	206·815	332	1·188	188	44·818	196·5178	·8761	177·06	215·36	·46	36·29	·29	33·98
	7	335·333	207·147	325	+1·207	−190	44·586	196·6970	+0·8853	132·67	155·71	+0·48	36·48	·30	34·16
	9	·299	207·472	318	1·227	191	44·351	196·8763	·8945	88·29	96·06	·49	36·68	·31	34·34
	11	·266	207·790	309	1·246	192	44·113	197·0556	·9036	43·92	36·43	·50	36·88	·32	34·53
	13	·235	208·099	301	1·265	194	43·872	197·2349	·9128	359·56	336·81	·51	37·08	·33	34·72
	15	·206	208·400	292	1·284	195	43·629	197·4142	·9220	315·20	277·19	·53	37·28	·34	34·91
	17	335·178	208·692	283	+1·303	−195	43·383	197·5935	+0·9311	270·86	217·59	+0·54	37·49	·35	35·11
	19	·151	208·975	275	1·322	196	43·135	197·7729	·9403	226·53	158·00	·55	37·71	·36	35·31

Greenwich Noon		Angle of Position of ♃'s Axis. P	L − O.	Diff.	B	Corr. of log. Δ.	Light-time.	A − O.	β	Longitude of ♃'s Central Meridian. (877°·90) I.	Longitude of ♃'s Central Meridian. (870°·27) II.	Corr. for Phase.	Apparent Diameter. Equat.	Apparent Diameter. Phase.	Apparent Diameter. Polar.
1891.		°	°		°		m	°	°	°	°	°	″	″	″
May	21	335·125	209·250	266	+1·340	−196	42·885	197·9523	+0·9494	182·20	98·42	+0·56	37·93	0·37	35·52
	23	·101	209·516	256	1·358	197	42·633	198·1318	·9586	137·89	38·84	·57	38·15	·38	35·73
	25	·078	209·772	246	1·376	197	42·380	198·3113	·9677	93·59	339·28	·57	38·38	·38	35·94
	27	335·056	210·018	237	+1·394	−197	42·125	198·4908	+0·9768	49·30	279·72	+0·58	38·61	·39	36·16
	29	·036	210·255	227	1·412	196	41·869	198·6704	0·9860	5·02	220·18	·58	38·85	·40	36·38
	31	335·017	210·482	217	1·429	196	41·612	198·8500	0·9951	320·75	160·65	·59	39·09	·40	36·60
June	2	334·999	210·699	206	1·446	195	41·354	199·0296	1·0042	276·49	101·13	·59	39·33	·41	36·83
	4	·983	210·905	196	1·463	194	41·096	199·2093	1·0132	232·24	41·62	·59	39·58	·41	37 06
	6	334·967	211·101	185	+1·479	−193	40 837	199·3890	+1·0223	188·00	342·12	+0·59	39·83	·41	37·30
	8	·953	211·286	173	1·495	192	40·578	199·5687	1·0314	143·78	282·63	·59	40·09	·42	37·54
	10	·939	211·459	162	1·511	191	40·319	199·7485	1·0405	99·57	223·16	·59	40·34	·42	37·78
	12	·927	211·621	151	1·526	189	40·061	199·9283	1·0496	55·36	163·69	·59	40·60	·42	38·02
	14	·916	211·772	139	1·541	188	39·803	200·1081	1·0586	11·16	104·23	·59	40·87	·42	38·27
	16	334·906	211·911	127	+1·556	−186	39·546	200·2880	+1·0677	326·98	44·79	+0·59	41·13	·42	38·52
	18	·896	212·038	115	1·571	184	39·280	200·4679	1·0767	282·81	345·36	·58	41·40	·42	38·77
	20	·888	·153	103	1·585	182	39·036	200·6478	1·0857	238·65	285·94	·58	41·67	·42	39·02
	22	·880	·256	91	1·599	179	38·784	200·8278	1·0947	194·50	226·53	·57	41·94	·42	39·27
	24	·873	·347	79	1·612	177	38·533	201·0078	1·1037	150·36	167·13	·56	42·21	·41	39·53
	26	334·867	212·426	66	+1·625	−174	38·284	201·1878	+1·1127	106·23	107·74	+0·55	42·49	·41	39·78

1891MNRAS..51..360M

1891MNRAS..51..360M

Greenwich Noon		Angle of Position of ♃'s Axis. P	L−O.	Diff.	B	Corr. of log. Δ.	Light-time.	A−O.	β	Longitude of ♃'s Central Meridian. (877°·90) I.	Longitude of ♃'s Central Meridian. (870°·27) II.	Corr. for Phase.	Apparent Diameter. Equat.	Apparent Diameter. Phase.	Apparent Diameter. Polar.
1891.		°	°		°		m	°	°	°	°	°	″	″	″
June	28	334·863	212·492	53	+1·637	−171	38·038	201·3679	+1·1217	62·12	48·36	+0·54	42·76	0·40	40·04
	30	·859	·545	40	1·649	168	37·794	201·5480	1·1307	18·02	348·99	·53	43·04	·40	40·30
July	2	·856	·585	27	1·661	165	37·554	201·7281	1·1397	333·92	289·64	·52	43·32	·39	40·56
	4	·853	·612	15	1·672	162	37·316	201·9083	1·1486	289·84	230·30	·50	43·59	·38	40·82
	6	334·852	212·627	1	+1·683	−158	37·082	202·0885	+1·1576	245·77	170·96	+0·48	43·87	·37	41·08
	8	·852	·628	12	1·693	155	36·852	202·2687	1·1666	201·71	111·64	·47	44·14	·36	41·33
	10	·852	·616	25	1·703	151	36·626	202·4490	1·1755	157·66	52·33	·45	44·41	·35	41·59
	12	·853	·591	38	1·712	147	36·404	202·6293	1·1844	113·62	353·03	·43	44·68	·34	41·84
	14	·855	·553	51	1·720	143	36·187	202·8096	1·1933	69·59	293·74	·41	44·95	·32	42·09
	16	334·858	212·502	63	+1·728	−139	35·975	202·9900	+1·2022	25·57	234·46	+0·39	45·22	·31	42·34
	18	·862	·439	76	1·736	135	35·768	203·1704	1·2111	341·55	175·18	·37	45·48	·30	41·58
	20	·866	·363	89	1·743	130	35·567	203·3508	1·2200	297·55	115·92	·35	45·74	·28	42·82
	22	·871	·274	101	1·749	126	35·372	203·5312	1·2288	253·56	56·67	·33	45·99	·27	43·06
	24	·878	·173	113	1·755	121	35·182	203·7117	1·2377	209·58	357·43	·31	46·24	·25	43·29
	26	334·886	212·060	126	+1·760	−116	34·999	203·8922	+1·2465	165·60	298·19	+0·29	46·48	·24	43·52
	28	·894	211·934	137	1·765	111	34·822	204·0727	1·2554	121·64	238·96	·27	46·71	·22	43·74
	30	·903	211·797	149	1·769	106	34·652	204·2533	1·2642	77·68	179·74	·25	46·94	·20	43·96
Aug.	1	·913	211·648	160	1·772	101	34·489	204·4339	1·2730	33·73	120·53	·23	47·16	·19	44·16
	3	·925	211·488	171	1·775	96	34·334	204·6145	1·2818	349·78	61·32	·21	47·38	·17	44·36

1891MNRAS..51..360M

Greenwich Noon	Angle of Position of ♃'s Axis. P	L−O.	Diff.	B	Corr. of log. Δ.	Light-time.	A−O.	β	Longitude of ♃'s Central Meridian. (877°·90) I.	Longitude of ♃'s Central Meridian. (870°·27) II.	Corr. for Phase.	Apparent Diameter. Equat.	Apparent Diameter. Phase.	Apparent Diameter. Polar.
1891.	°	°		°		m	°	°	°	°	°	"	"	"
Aug. 5	334·937	211·317	182	+1·777	− 91	34·186	204·7951	+1·2906	305·84	2·12	+0·19	47·58	0·15	44·55
7	·950	211·135	191	1·778	86	34·046	204·9758	1·2994	261·91	302·93	·17	47·78	·14	44·74
9	·964	210·944	201	1·779	80	33·914	205·1565	1·3081	217·98	243·74	·15	47·96	·12	44·91
11	·979	210·743	209	1·779	75	33·791	205·3373	1·3169	174·06	184·56	·13	48·14	·11	45·08
13	334·995	210·534	218	1·778	69	33·676	205·5181	1·3257	130·14	125·38	·11	48·30	·09	45·23
15	335·013	210·316	226	+1·777	−63	33·570	205·6989	+1·3344	86·22	66·20	+0·09	48·46	·08	45·37
17	·031	210·090	232	1·775	58	33·473	205·8797	1·3431	42·30	7·02	·08	48·60	·07	45·50
19	·050	209·858	239	1·772	52	33·385	206·0606	1·3518	358·39	307·85	·06	48·72	·05	45·62
21	·070	209·619	245	1·769	46	33·306	206·2415	1·3605	314·48	248·67	·05	48·84	·04	45·73
23	·091	209·374	250	1·765	40	33·237	206·4224	1·3692	270·56	189·50	·04	48·94	·03	45·83
25	335·113	209·124	255	+1·761	−34	33·177	206·6033	+1·3779	226·65	130·33	+0·03	49·03	·03	45·91
27	·136	208·869	258	1·756	28	33·126	206·7843	1·3865	182·73	71·15	·02	49·11	·02	45·98
29	·160	208·611	261	1·751	22	33·085	206·9653	1·3952	138·82	11·97	·01	49·17	·01	46·04
31	·184	208·350	264	1·745	16	33·055	207·1463	1·4038	94·90	312·79	·01	49·21	·01	46·08
Sept. 2	·209	208·086	265	1·738	10	33·034	207·3274	1·4124	50·98	253·61	·00	49·24	·00	46·11
4	335·235	207·821	265	+1·731	− 4	33·023	207·5085	+1·4210	7·05	194·42		49·26		46·12
6	·261	207·556	265	1·723	+ 2	33·021	207·6896	1·4296	323·11	135·23		49·26		46·12
8	·288	207·291	264	1·715	8	33·031	207·8708	1·4382	279·17	76·03	·00	49·25		46·11
10	·315	207·027	262	1·706	14	33·050	208·0520	1·4468	235·22	16·82	−0·01	49·22	·00	46·09

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Greenwich Noon		Angle of Position of ♃'s Axis. P	L−O.	Diff.	B	Corr. of log. Δ.	Light-time.	Λ−O.	β	Longitude of ♃'s Central Meridian. (877°·90) I.	Longitude of ♃'s Central Meridian. (870°·27) II.	Corr. for Phase.	Apparent Diameter. Equat.	Apparent Diameter. Phase.	Apparent Diameter. Polar.
1891.		°	°		°		m	°	°	°	°	°	″	″	″
Sept.	12	335·343	206·765	259	+1·697	+20	33·080	208·2332	+1·4553	191·27	317·60	−0·01	49·17	0·01	46·05
	14	335·371	206·506	256	+1·688	+26	33·119	208·4144	+1·4639	147·30	258·38	−0·02	49·11	·01	45·99
	16	·399	206·250	252	1·679	32	33·168	208·5957	1·4724	103·33	199·15	·02	49·04	·02	45·92
	18	·427	205·998	247	1·669	38	33·226	208·7770	1·4809	59·35	139·90	·03	48·96	·03	45·84
	20	·454	205·751	241	1·658	44	33·295	208·9583	1·4894	15·35	80·65	·05	48·86	·04	45·75
	22	·482	205·510	234	1·648	50	33·373	209·1396	1·4979	331·34	21·38	·06	48·74	·05	45·64
	24	335·509	205·276	228	+1·637	+56	33·460	209·3210	+1·5064	287·32	322·10	−0·07	48·62	·06	45·52
	26	·536	205·048	220	1·627	62	33·556	209·5024	1 5148	243·29	262·81	·09	48·48	·07	45·39
	28	·563	204·828	211	1·616	68	33·662	209·6838	1·5233	199·25	203·51	·10	48·32	·09	45·25
	30	·588	204·617	203	1·605	73	33·777	209·8653	1·5317	155·19	144·19	·12	48·16	·10	45·10
Oct.	2	·613	204·414	193	1·594	79	33·901	210·0467	1·5401	111·12	84·86	·14	47·98	·12	44·93
	4	335·637	204·221	183	+1·583	+85	34·033	210·2282	+1·5485	67·03	25·51	−0·16	47·80	·13	44·75
	6	·660	204·038	173	2·572	90	34·174	210·4097	1·5569	22·93	326·15	·18	47·60	·15	44·57
	8	·682	203·865	161	1·561	96	34·323	210·5913	1·5653	338·81	266·77	·20	47·39	·16	44·38
	10	·703	203·704	150	1·550	101	34·480	210·7729	1·5737	294·68	207·38	·22	47·18	·18	44·17
	12	·723	203·554	138	1·540	106	34·644	210·9545	1·5820	250·53	147·97	·24	46·95	·19	43·96
	14	335·741	203·416	125	+1·529	+112	34·816	211·1361	+1·5903	206·36	88·54	−0·26	46·72	·21	43·75
	16	·758	203·291	113	1·519	117	34·995	211·3178	1·5986	162·17	29·10	·28	46·48	·23	43·52
	18	·773	203·178	101	1·509	122	35·181	211·4995	1·6069	117·97	329·64	·30	46·24	·24	43·29

Greenwich Noon		Angle of Position of ♃'s Axis. P	L−O.	Diff.	B	Corr. of log. Δ.	Light-time.	Λ−O.	β	Longitude of ♃'s Central Meridian. (877°·90) I.	Longitude of ♃'s Central Meridian. (870°·27) II.	Corr. for Phase.	Apparent Diameter. Equat.	Apparent Diameter. Phase.	Apparent Diameter. Polar.
1891.		°	°		°		m	°	°	°	°	°	″	″	″
Oct.	20	335·787	203·077	88	+1·499	+127	35·373	211·6812	+1·6152	73·75	270·16	−0·32	45·99	0·26	43·06
	22	·799	202·989	75	1·490	131	35·571	211·8629	1·6235	29·52	210·67	·34	45·73	·27	42·82
	24	335·809	202·914	61	+1·481	+136	35·776	212·0447	+1·6317	345·27	151·16	−0·36	45·47	·29	42·57
	26	·818	202·853	48	1·472	140	35·987	212·2265	1·6400	301·01	91·64	·38	45·20	·30	42·33
	28	·825	202·805	34	1·463	145	36·202	212·4083	1·6482	256·72	32·10	·40	44·93	·31	42·07
	30	·830	202·771	21	1·455	149	36·423	212·5901	1·6564	212·42	332·54	·42	44·66	·33	41·82
Nov.	1	·833	202·750	7	1·447	153	36·649	212·7719	1·6646	168·11	272·96	·44	44·39	·34	41·56
	3	335·835	202·743	7	+1·440	+157	36·879	212·9538	+1·6728	123·77	213·37	−0·45	44·11	·35	41·30
	5	·834	202·750	21	1·433	161	37·114	213·1357	1·6809	79·42	153·76	·47	43·83	·36	41·04
	7	·832	202·771	34	1·427	164	37·353	213·3176	1·6891	35·06	94·13	·48	43·55	·37	40·78
	9	·828	202·805	48	1·421	168	37·595	213·4996	1·6972	350·68	34·49	·50	43·27	·38	40·51
	11	·822	202·853	62	1·416	171	37·840	213·6815	1·7053	306·28	334·84	·51	42·99	·38	40·25
	13	335·814	202·915	75	+1·411	+174	38·088	213·8635	+1·7134	261·87	275·17	−0·52	42·71	·39	39·99
	15	·805	202·990	88	1·406	177	38·339	214·0455	1·7215	217·44	215·48	·53	42·43	·39	39·73
	17	·794	203·078	101	1·402	180	38·592	214·2275	1·7296	173·00	155·78	·54	42·15	·40	39·47
	19	·781	203·179	114	1·399	183	38·847	214·4096	1·7376	128·54	96·06	·55	41·87	·40	39·21
	21	·766	203·293	127	1·396	185	39·104	214·5917	1·7457	84·07	36·33	·55	41·60	·40	38·85
	23	335·750	203·420	140	+1·393	+187	39·363	214·7738	+1·7537	39·58	336·59	−0·56	41·32	·40	38·69
	25	·732	203·560	152	1·391	189	39·623	214·9559	1·7617	355·08	276·83	·56	41·05	·40	38·44

Greenwich Noon		Angle of Position of ♃'s Axis. P	L–O.	Diff.	B	Corr. of log. Δ.	Light-time.	Λ–O.	β	Longitude of ♃'s Central Meridian. (877°·90) I.	Longitude of ♃'s Central Meridian. (870°·27) II.	Corr. for Phase.	Apparent Diameter. Equat.	Apparent Diameter. Phase.	Apparent Diameter. Polar.
1891.		°	°		°		m	°	°	°	°	°	"	"	"
Nov.	27	335·713	203·712	164	+1·390	+191	39·884	215·1380	+1·7697	310·57	217·06	–0·57	040·79	0·40	38·19
	29	·693	203·876	177	1·389	193	40·145	215·3202	1·7776	266·05	157 28	·57	40·52	·40	37·94
Dec.	1	·671	204·053	189	1·389	194	40·407	215·5024	1·7856	221·51	97·49	·57	40·26	·40	37·69
	3	335·648	204·242	200	+1·389	+195	40·669	215·6846	+1·7935	176·96	37 68	–0·57	40·00	·40	37·45
	5	·623	204·442	212	1·390	196	40·931	215·8668	1·8014	132·40	337·86	·57	39·74	·39	37·21
	7	·598	204·654	223	1·391	197	41·192	216·0491	1·8093	87·83	278·03	.56	39·49	·39	36·97
	9	·572	204·877	234	1·392	198	41·452	216·2314	1·8172	43·25	218·19	·56	39·24	·38	36·74
	11	·544	205·111	244	1·394	198	41·712	216·4137	1·8251	358·66	158·34	·55	39·00	·38	36·51
	13	335·515	205·355	255	+1·397	+198	41·970	216·5960	+1·8329	314·06	98·48	–0·55	38·76	·37	36·29
	15	·486	205·610	265	1·400	198	42·227	216·7783	1·8407	269·45	38·61	·54	38·52	·36	36·07
	17	·456	205·875	275	1·404	198	42·482	216·9606	1·8485	224·83	338·73	·54	38·29	·36	35·85
	19	·426	206·150	285	1·408	198	42·735	217·1430	1·8563	180·20	278 84	·53	38·06	·35	35·64
	21	·395	206·435	294	1·413	197	42·986	217·3254	1·8641	135·56	218·95	·52	37·84	·34	35·43
	23	335·363	206·729	303	+1·418	+196	43·235	217·5079	+1·8719	90·91	159·04	–0·51	37·62	0·33	35·23
	25	·331	207·032	312	1·424	195	43·482	217·6903	1·8796	46·26	99·13	·49	37·41	·32	35·03
	27	·299	207·344	321	1·430	194	43·725	217·8728	1·8873	1·60	39·21	·48	37·20	·31	34·83
	29	·267	207·665	330	1·436	192	43·966	218·0553	1·8950	316·93	339·28	·47	37·00	·30	34·64
	31	·234	207·995	338	1·443	191	44·203	218·2378	1·9027	272·26	279·35	·46	36·80	·29	34·46

1891MNRAS..51..360M

Greenwich Noon		Angle of Position of ♃'s Axis. P	L–O.	Diff.	B	Corr. of log. Δ.	Light-time.	A–O.	β	Longitude of ♃'s Central Meridian. (877°·90) I.	Longitude of ♃'s Central Meridian. (870°·27) II.	Corr. for Phase.	Apparent Diameter. Equat.	Apparent Diameter. Phase.	Apparent Diameter. Polar.
1892. Jan.	2	335°·201	208°·333	346	+1°·451	+189	44m·437	218°·4203	+1°·9103	227°·58	219°·41	–0°·44	36″·61	0″·28	34″·28
	4	·169	208·679	353	1·459	187	44·667	218·6028	1·9180	182·89	159·47	·43	36·42	·27	34·10
	6	·137	209·032	361	1·467	185	44·894	218·7854	1·9256	138·20	99·52	·41	36·23	·26	33·93
	8	·105	209·393	368	1·475	182	45·116	218·9679	1·9332	93·50	39·56	·40	36·05	·25	33·76
	10	·073	209·761	375	1·484	180	45·335	219·1505	1·9408	48·80	339·60	·38	35·88	·24	33·60
	12	335·041	210·136	382	+1·493	+177	45·549	219·3331	+1·9483	4·10	279·64	–0·37	35·71	·23	33·44
	14	335·010	210·518	388	1·503	175	45·759	219·5158	1·9559	319·39	219·67	·35	35·55	·22	33·29
	16	334·979	210·906	394	1·513	171	45·964	219·6984	1·9634	274·68	159·70	·34	35·39	·21	33·14
	18	·949	211·300	401	1·524	167	46·164	219·8811	1·9709	229·96	99·72	·32	35·24	·20	32·99
	20	·920	211·701	406	1·535	164	46·360	220·0638	1·9784	185·24	39·74	·30	35·09	·19	32·85
	22	334·891	212·107	411	+1·546	+160	46·550	220·2465	+1·9859	140·51	339·76	–0·29	34·94	·18	32·72
	24	·863	212·518	417	1·557	156	46·736	220·4292	1·9933	95·79	279·78	·27	34·80	·17	32·59
	26	·836	212·935	423	1·569	152	46·916	220·6119	2·0008	51·06	219·79	·26	34·67	·16	32·47
	28	·810	213·358	427	1·581	148	47·091	220·7947	2·0082	6·33	159·80	·24	34·54	·15	32·35
	30	·785	213·785	432	1·594	143	47·261	220·9774	2·0156	321·60	99·81	·23	34·42	·14	32·23
Feb.	1	334·761	214·217	436	+1·606	+139	47·424	221·1602	+2·0229	276·87	39·82	–0·21	34·30	·13	32·12
	3	·738	214·653	440	1·619	134	47·582	221·3430	2·0303	232·14	339·83	·20	34·19	·12	32·01
	5	·716	215·093	444	1·632	130	47·734	221·5259	2·0376	187·41	279·84	·18	34·08	·11	31·91
	7	·695	215·537	448	1·646	125	47·880	221·7087	2·0449	142·67	219·85	·17	33·97	·10	31·81
	9	·675	215·985	452	1·660	120	48·021	221·8916	2·0522	97·94	159·85	·15	33·87	·09	31·72
	11	334·657	216·437		+1·674	+114	48·155	222·0745	+2·0595	53·21	99·86	–0·14	33·78	0·08	31·63

1891MNRAS..51..360M

1891MNRAS..51..360M

The present ephemeris is intended to be of service not only for physical observations of *Jupiter*, but also in the computations of the positions of the satellites, for which the necessary data and tables will be supplied in the next number of the *Monthly Notices.* For this reason some alterations have been made, and the data are furnished for every second, instead of every fifth, day, so that the second differences may be more easily taken into account.

The angle L—O+180° is the jovicentric longitude of the Earth, reckoned in the assumed plane of *Jupiter's* equator from O, the point of the vernal equinox of *Jupiter's* northern hemisphere, or the point of the descending node of the planet's equator on its orbit. B denotes the jovicentric latitude of the Earth above *Jupiter's* equator.

"Corr. of log. Δ" is the correction to be applied to the *Nautical Almanac* "log. of true distance from the Earth" in order to obtain the log. of the distance between the Earth at Greenwich noon and the place of *Jupiter* at the time, when the light-waves arriving at Greenwich noon left the planet. These corrected distances are to be interpolated directly for the times for which the apparent positions of the satellites are to be computed in order to get the distances which ought to be employed.

The column "Light-time" gives the interval of mean time, expressed in minutes, which light requires to traverse the corrected distance. The adopted constant for distance 1 is $498^{s}\cdot92$, corresponding to the constant of aberration $20''\cdot492$.

The angle Λ—O+180° is the jovicentric apparent longitude of the Sun or Λ—O the longitude of the axis of the shadow-cone, β the latitude of the Sun above *Jupiter's* equator.

The two values of the "longitude of ♃'s central meridian" given for each date are computed with the same rates of rotation as in the ephemerides for several preceding oppositions; but in "system II." the zero-meridian has been put back 10° or the longitudes have been increased 10°, so that the great spot, in case it keeps to the adopted rate, may just follow the zero-meridian. Should the motion become more settled, the time will have arrived for the proper investigation of its fluctuations since the appearance of the spot in 1879. According to Mr. A. S. Williams's interesting observations of *Jupiter's* spots, made in 1890, and published in the *Journal of the British Astronomical Association*, vol. i. pp. 116–119, "the bright equatorial zone appeared in a remarkable state of quiescence. Conspicuous markings were hardly ever seen. . . ." The two bright spots of 1888, on the observed motions of which the daily rate $877^{\circ}\cdot90$ depends (*vide M. N.* vol. xlix. pp. 88 and 94), do not seem to have been recognised under such altered conditions in 1890, but as the motions of the two markings, of which some observed transit-times are published, are approximately represented by the rate adopted in system I. of the ephemeris, I have made no alteration. It is to be hoped that during the ensuing more

1891MNRAS..51..360M

favourable apparition of *Jupiter* the surface of the planet will be assiduously scrutinised, and the times of transits of all the more remarkable spots and markings across the middle of the disc carefully recorded.

The differences of successive values of the longitudes of ♃'s central meridian vary for I. between 1755°·28 and 1756°·08, and for II. between 1740°·02 and 1740°·82.

The addition of the "correction for phase" to the longitudes of the central meridian gives the longitudes of the meridian which bisects the illuminated disc. The following is a list of Greenwich mean times, when the zero-meridian in the assumed two systems of longitudes will pass the middle of the disc. The times between successive passages vary between $10^{h}\ 50^{m}{\cdot}40$ and $50^{m}{\cdot}68$ in the first system, and between $10^{h}\ 55^{m}{\cdot}58$ and $55^{m}{\cdot}86$ in the second.

	I.	II.		I.	II.
	(877°·90)	(870°·27)		(877°·90)	(870°·27)
1891.	h m	h m	1891.	h m	h m
Apr. 17	13 44·6	18 57·0	May 10	12 56·6	13 3·1
18	19 16·4	14 48·5		22 47·1	22 58·9
19	14 57·6	20 35·8	11	8 37·7	8 54·6
20	20 29·3	16 27·3		18 28·2	18 50·3
21	16 10·5	12 18·8	12	14 9·3	14 41·8
22	11 51·6	18 6·1	13	9 50·4	10 33·3
23	17 23·4	13 57·6		19 41·0	20 29·0
24	13 4·5	19 44·9	14	15 22·1	16 20·4
25	18 36·3	15 36·4	15	11 3·2	12 11·9
26	14 17·4	11 27·9		20 53·7	22 7·6
27	9 58·6	7 19·4	16	6 44·3	8 3·3
	19 49·2	17 15·2		16 34·8	17 59·0
28	15 30·3	13 6·7	17	12 15·9	13 50·5
29	11 11·4	8 58·2		22 6·4	23 46·2
	21 2·0	18 53·9	18	7 57·0	9 41·9
30	16 43·1	14 45·4		17 47·5	19 37·6
May 1	12 24·3	10 36·9	19	13 28·6	5 33·3
	22 14·8	20 32·6		23 19·1	15 29·1
2	8 5·4	6 28·4	20	9 9·7	11 20·5
	17 56·0	16 24·1		19 0·2	21 16·2
3	13 37·1	12 15·6	21	14 41·3	17 7·6
	23 27·8	22 11·4	22	10 12·5	12 59·1
4	9 18·3	8 7·1		20 12·9	22 54·8
	19 8·8	18 2·8	23	6 3·4	8 50·5
5	14 49·9	13 54·3		15 53·9	18 46·2
6	10 31·0	9 45·8	24	11 35·0	14 37·6
	20 21·6	19 41·5		21 25·5	24 33·3
7	16 2·7	15 33·0	25	7 16·1	10 29·0
8	11 43·8	11 24·5		17 6·6	20 24·8
	21 34·4	21 20·2	26	12 47·7	6 20·5
9	7 24·9	7 15·9		22 38·2	16 16·2
	17 15·5	17 11·7	27	8 28·7	12 7·6

1891MNRAS..51..360M

1891.	I. (877°·90) h m	II. (870°·27) h m	1891.	I. (877°·90) h m	II. (870°·27) h m
May 27	18 19·2	22 3·3	June 19	7 37·1	6 10·3
28	14 0·3	7 59·0		17 27·6	16 5·9
	23 50·8	17 54·7	20	13 8·6	11 57·2
29	9 41·3	13 46·1		22 59·1	21 52·9
	19 31·9	23 41·8	21	8 49·5	7 48·6
30	5 22·4	9 37·5		18 40·0	17 44·2
	15 12·9	19 33·2	22	14 21·0	13 35·5
31	10 53·9	15 24·6		24 11·5	23 31·2
	20 44·5	25 20·3	23	10 2·0	9 26·9
June 1	6 35·0	11 16·0		19 52·5	19 22·5
	16 25·5	21 11·7	24	15 33·4	15 13·8
2	12 6·5	7 7·4	25	1 23·9	1 9·5
	21 57·0	17 3·1		11 14·4	11 5·2
3	7 47·6	12 54·5		21 4·9	21 0·8
	17 38·1	22 50·1	26	6 55·3	6 56·5
4	13 19·1	8 45·8		16 45·8	16 52·1
	23 9·6	18 41·5	27	12 26·8	12 43·4
5	9 0·1	14 32·9		22 17·2	22 39·1
	18 50·6	24 28·6	28	8 7·7	8 34·7
6	14 31·7	10 24·3		17 58·2	18 30·4
	24 22·2	20 20·0	29	13 39·1	14 21·7
7	10 12·7	6 15·7		23 29·6	24 17·3
	20 3·2	16 11·4	30	9 20·0	10 13·0
8	15 44·2	12 2·7		19 10·5	20 8·6
	25 34·7	21 58·4	July 1	14 51·4	15 59·9
9	11 25·2	7 54·1	2	0 41·9	1 55·6
	21 15·7	17 49·8		10 32·4	11 51·2
10	7 6·2	13 41·1		20 22·9	21 46·8
	16 56·7	23 36·8	3	6 13·3	7 42·5
11	12 37·7	9 32·5		16 3·8	17 38·1
	22 28·2	19 28·2	4	11 45·7	13 29·4
12	8 18·7	15 19·5		21 35·2	23 25·0
	18 9·2	25 15·2	5	7 25·6	9 20·7
13	13 50·2	11 10·9		17 16·1	19 16·3
	23 40·7	21 6·6	6	12 57·0	15 7·6
14	9 31·2	7 2·2		22 47·5	25 3·2
	19 21·7	16 57·9	7	8 37·9	10 58·9
15	15 2·7	12 49·2		18 28·4	20 54·5
	24 53·2	22 44·9	8	14 9·3	6 50·1
16	10 43·7	8 40·6		23 59·8	16 45·8
	20 34·2	18 36·3	9	9 50·2	12 37·0
17	6 24·7	14 27·6		19 40·7	22 32·7
	16 15·2	24 23·3	10	5 31·1	8 28·3
18	11 56·1	10 18·9		15 21·6	18 23·9
	21 46·6	20 14·6	11	11 2·5	14 15·2

1891MNRAS..51..360M

	I.		II.	
	(877°·90)		(870°·27)	
1891.	h	m	h	m
July 11	20	52·9	24	10·8
12	6	43·4	10	6·4
	16	33·8	20	2·1
13	12	14·7	5	57·7
	22	5·2	15	53·3
14	7	55·6	11	44·6
	17	46·1	21	40·2
15	13	27·0	7	35·8
	23	17·4	17	31·4
16	9	7·9	13	22·7
	18	58·3	23	18·3
17	14	39·2	9	13·9
	24	29·6	19	9·5
18	10	20·1	15	0·8
	20	10·5	24	56·4
19	6	1·0	10	52·0
	15	51·4	20	47·6
20	11	32·3	6	43·2
	21	22·7	16	38·9
21	7	13·2	12	30·1
	17	3·6	22	25·7
22	12	44·5	8	21·3
	22	34·9	18	16·9
23	8	25·3	14	8·1
	18	15·8	24	3·7
24	13	56·6	9	59·4
	23	47·1	19	55·0
25	9	37·5	5	50·6
	19	27·9	15	46·2
26	15	8·8	11	37·4
	24	59·2	21	33·0
27	10	49·6	7	28·6
	20	40·1	17	24·2
28	6	30·5	13	15·4
	16	20·9	23	11·0
29	12	1·8	9	6·6
	21	52·2	19	2·2
30	7	42·6	14	53·4
	17	33·0	24	49·0
31	13	13·9	10	44·6
	23	4·3	20	40·2
Aug. 1	8	54·7	6	35·8
	18	45·2	16	31·4
2	14	26·0	12	22·6
	24	16·4	22	18·2

	I.		II.	
	(877°·90)		(870°·27)	
1891.	h	m	h	m
Aug. 3	10	6·8	8	13·8
	19	57·3	18	9·4
4	5	47·7	14	0·6
	15	38·1	23	56·2
5	11	18·9	9	51·8
	21	9·4	19	47·4
6	6	59·8	5	42·9
	16	50·2	15	38·5
7	12	31·0	11	29·7
	22	21·4	21	25·3
8	8	11·8	7	20·9
	18	2·3	17	16·5
9	13	43·1	13	7·7
	23	33·5	23	3·3
10	9	23·9	8	58·9
	19	14·3	18	54·4
11	14	55·2	14	45·6
12	0	45·6	0	41·2
	10	36·0	10	36·8
	20	26·4	20	32·4
13	6	16·8	6	28·0
	16	7·2	16	23·6
14	11	48·1	12	14·7
	21	38·5	22	10·3
15	7	28·9	8	5·9
	17	19·3	18	1·5
16	13	0·1	13	52·7
	22	50·5	23	48·3
17	8	40·9	9	43·8
	18	31·3	19	39·4
18	14	2·1	15	30·6
19	0	2·5	1	26·2
	9	52·9	11	21·8
	19	43·4	21	17·3
20	5	33·8	7	12·9
	15	24·2	17	8·5
21	11	5·0	12	59·7
	20	55·4	22	55·3
22	6	45·8	8	50·8
	16	36·2	18	46·4
23	12	17·0	14	37·6
	22	7·4	24	33·2
24	7	57·8	10	28·8
	17	48·3	20	24·3
25	13	29·1	6	19·9

1891MNRAS..51..360M

1891.	I. (877°·90) h	m	II. (870°·27) h	m
Aug. 25	23	19·5	16	15·5
26	9	9·9	12	6·7
	19	0·3	22	2·2
27	4	50·7	7	57·8
	14	41·1	17	53·4
28	10	21·9	13	44·6
	20	12·3	23	40·2
29	5	2·7	9	35·7
	15	53·1	19	31·3
30	11	33·9	5	26·9
	21	24·3	15	22·5
31	7	14·7	11	13·7
	17	5·2	21	9·2
Sept. 1	12	46·0	7	4·8
	22	36·4	17	0·4
2	8	26·8	12	51·6
	18	17·2	22	47·2
3	4	7·6	8	42·8
	13	58·0	18	38·3
4	9	38·8	4	33·9
	19	29·3	14	29·5
5	5	19·7	10	20·7
	15	10·1	20	16·3
6	10	50·9	6	11·9
	20	41·3	16	7·5
7	6	31·7	11	58·6
	16	22·1	21	54·2
8	12	3·0	7	49·8
	21	53·4	17	45·4
9	7	43·8	3	41·0
	17	34·2	13	36·6
10	13	15·1	9	27·8
	23	5·5	19	23·4
11	8	55·9	5	19·0
	18	46·3	15	14·6
12	4	36·7	11	5·8
	14	27·2	21	1·4
13	10	8·0	6	56·9
	19	58·4	16	52·5
14	5	48·8	2	48·1
	15	39·3	12	43·7
15	11	20·1	8	35·0
	21	10·6	18	30·6
16	7	1·0	4	26·2
	16	51·4	14	21·8
Sept. 17	2	41·9	10	13·0
	12	32·3	20	8·6
18	8	13·2	6	4·2
	18	3·6	15	59·8
19	3	54·0	1	55·4
	13	44·5	11	51·0
20	9	25·3	7	42·3
	19	15·8	17	37·9
21	5	6·2	3	33·5
	14	56·7	13	29·1
22	10	37·5	9	20·3
	20	28·0	19	16·0
23	6	18·4	5	11·6
	16	8·9	15	7·2
24	1	59·3	1	2·8
	11	49·7	10	58·4
25	7	30·6	6	49·7
	17	21·1	16	45·3
26	3	11·5	2	40·9
	13	2·0	12	36·6
27	8	42·9	8	27·8
	18	33·4	18	23·5
28	4	23·8	4	19·1
	14	14·3	14	14·7
29	9	55·2	10	6·0
	19	45·6	20	1·6
30	5	36·1	5	57·3
	15	26·6	15	52·9
Oct. 1	1	17·0	1	48·5
	11	7·5	11	44·2
2	6	48·4	7	35·5
	16	38·9	17	31·1
3	2	39·4	3	26·8
	12	19·8	13	22·4
4	8	0·8	9	13·7
	17	51·2	19	9·4
5	3	41·7	5	5·0
	13	32·2	15	0·7
6	9	13·2	0	56·3
	19	3·6	10	52·0
7	4	54·1	6	43·3
	14	44·6	16	38·9
8	0	35·1	2	34·6
	10	25·6	12	30·2
9	6	6·5	8	21·6

1891MNRAS..51..360M

	I.		II.	
	(877°·90)		(870°·27)	
1891.	h	m	h	m
Oct. 9	15	57·0	18	17·2
10	1	47·5	4	12·9
	11	38·0	14	8·5
11	7	19·0	9	59·9
	17	9·5	19	55·6
12	3	0·0	5	51·2
	12	50·4	15	46·9
13	8	31·4	1	42·6
	18	21·9	11	38·2
14	4	12·4	7	29·6
	14	2·9	17	25·3
15	9	43·9	3	21·0
	19	34·4	13	16·6
16	5	14·9	9	8·0
	15	5·5	19	3·7
17	0	56·0	4	59·4
	10	46·5	14	55·0
18	6	37·5	0	50·7
	16	28·0	10	46·4
19	2	18·5	6	37·8
	12	9·0	16	33·5
20	7	50·1	2	29·2
	17	40·6	12	24·9
21	3	31·1	8	16·3
	13	21·6	18	12·0
22	9	2·7	4	7·7
	18	53·2	14	3·4
23	4	43·7	9	54·8
	14	34·2	19	50·5
24	0	24·8	5	46·2
	10	15·3	15	41·9
25	5	56·3	1	37·6
	15	46·9	11	33·3
26	1	37·4	7	24·7
	11	27·9	17	20·4
27	7	9·0	3	16·1
	16	59·5	13	11·8
28	2	50·1	9	3·3
	12	40·6	18	59·0
29	8	21·7	4	54·7
	18	12·2	14	50·4
30	4	2·8	0	46·1
	13	53·3	10	41·9
31	9	34·4	6	33·3
	19	24·9	16	29·0
Nov. 1	5	15·5	2	24·7

	I.		II.	
	(877°·90)		(870°·27)	
1891.	h	m	h	m
Nov. 1	15	6·0	12	20·5
2	0	56·6	8	11·9
	10	47·1	18	7·7
3	6	28·3	4	3·4
	16	18·8	13	59·1
4	2	9·4	9	50·6
	11	59·9	19	46·3
5	7	41·0	5	42·1
	17	31·6	15	37·8
6	3	22·2	1	33·5
	13	12·7	11	29·3
7	8	53·8	7	20·8
	18	44·4	17	16·5
8	4	35·0	3	12·2
	14	25·5	13	8·0
9	0	16·1	8	59·5
	10	7·7	18	55·2
10	5	47·8	4	51·0
	15	38·4	14	46·7
11	1	29·0	0	42·5
	11	19·5	10	38·2
12	7	0·7	6	29·7
	16	51·2	16	25·5
13	2	41·8	2	21·2
	12	32·4	12	17·0
14	8	13·6	8	8·5
	18	4·1	18	4·3
15	3	54·7	4	0·0
	13	45·3	13	55·8
	23	35·9	23	51·3
16	9	26·5	9	47·3
17	5	7·7	5	38·9
	14	58·2	15	34·6
18	0	48·8	1	30·4
	10	39·4	11	26·2
19	6	20·6	7	17·7
	16	11·2	17	13·5
20	2	1·8	3	9·2
	11	52·4	13	5·0
21	7	33·6	8	56·6
	17	24·2	18	52·3
22	3	14·8	4	48·1
	13	5·4	14	43·9
23	8	46·6	0	39·7
	18	37·2	10	35·4
24	4	27·8	6	27·0

	I.	II.
	(877°·90)	(870°·27)
1891.	h m	h m
Nov. 24	14 18·4	16 22·8
25	0 9·0	2 18·6
	9 59·6	12 14·3
26	5 40·8	8 5·9
	15 31·4	18 1·7
27	1 22·0	3 57·5
	11 12·6	13 53·3
	21 3·2	23 49·1
28	6 53·8	9 44·9
29	2 35·1	5 36·4
	12 25·7	15 32·2
	22 16·3	25 28·0
30	8 6·9	11 23·8
Dec. 1	3 48·1	7 15·4
	13 38·7	17 11·2
2	9 20·0	3 7·0
3	5 1·2	8 54·4
4	0 42·5	4 46·0
	10 33·1	14 41·8
5	6 14·3	0 37·6
	16 4·9	10 33·4
6	1 55·6	6 25·0
	11 46·2	16 20·8
7	7 27·4	2 16·6
	17 18·1	12 12·4
8	3 8·7	8 4·0
	12 59·3	17 59·8
9	8 40·6	3 55·6
	18 31·2	13 51·4
10	4 21·8	9 43·0
11	0 3·1	5 34·7
	9 53·7	15 30·5
12	5 35·0	1 26·3
	15 25·6	11 22·1
13	1 16·3	7 13·7
	11 6·9	17 9·5
14	6 48·2	3 5·4
	16 38·8	13 1·2
15	2 29·4	8 52·8
16	8 1·4	4 44·4
17	3 42·6	0 36·1
	13 33·3	10 31·9
18	9 14·6	6 23·5
19	4 55·9	2 15·2
	14 46·5	12 11·0
	24 37·1	22 6·8

	I.	II.
	(877°·90)	(870°·27)
1891.	h m	h m
Dec. 20	10 27·8	8 2·7
21	6 9·1	3 54·3
	25 50·4	23 46·0
22	11 41·0	9 41·8
23	7 32·2	5 33·4
24	3 3·6	1 25·1
	12 54·3	11 20·9
25	8 35·6	7 12·6
26	4 16·9	3 4·2
	23 58·2	22 55·9
27	9 48·8	8 51·7
28	5 30·1	4 43·4
29	1 11·4	0 35·1
	11 2·1	10 30·9
30	6 43·4	6 22·6
31	2 24·7	2 14·2
	12 15·4	12 10·1
	22 6·0	22 5·9
1892.		
Jan. 1	7 56·7	8 1·7
2	3 38·0	3 53·4
	23 19·3	23 45·1
3	9 10·0	9 40·9
4	4 51·3	5 32·6
5	0 32·6	1 24·3
	10 23·3	11 20·1
6	6 4·6	7 11·8
7	1 45·9	3 3·5
	11 36·6	12 59·3
	21 27·2	22 55·2
8	7 18·9	8 51·0
9	2 59·2	4 42·7
	12 49·9	14 38·6
	22 40·6	24 34·4
10	8 31·2	10 30·2
11	4 12·5	6 21·9
	23 53·9	26 13·6
12	9 44·5	12 9·5
13	5 25·9	8 1·2
14	1 7·2	3 52·8
	10 57·9	23 44·5
15	6 39·2	9 40·4
16	2 20·5	5 32·1
	22 1·9	25 23·8
17	7 52·5	11 19·6
18	3 33·9	7 11·3

1891MNRAS..51..360M

1891MNRAS..51..360M

1892.	I. (877°·90) h m	II. (870°·27) h m	1892.	I. (877°·90) h m	II. (870°·27) h m
Jan. 18	23 15·2	17 7·2	Jan. 29	5 22·0	1 23·5
19	9 5·9	3 3·0	30	1 3·4	7 11·0
20	4 47·2	8 50·6	31	6 35·4	3 2·7
21	0 28·6	4 42·3	Feb. 1	2 16·7	8 50·3
22	6 0·6	0 34·0	2	7 48·8	4 42·0
23	1 41·9	6 21·5	3	3 30·1	0 33·7
24	7 15·0	2 13·2		23 11·5	20 25·4
25	2 55·3	8 0·8	4	9 2·1	6 21·3
26	8 27·3	3 52·5	5	4 43·5	2 13·0
27	4 8·7	9 40·0		14 34·1	22 4·7
28	9 40·7	5 29·8	6	0 24·8	8 0·5

Errata in Mr. Turner's Note on the Recent Determination of the Longitude of Paris, Vol. LI. No. 3.

Page 156, line 2, *for* 44 13·75 *read* 44 13·86
,, ,, 3, *for* 9 21·16 *read* 9 21·05
,, ,, 12, *for* 19 2·12 *read* 19 2·23
,, ,, 13, *for* 9 21·19 *read* 9 21·08

[I am indebted to Professor Th. Albrecht for calling my attention to the note on p. 131 of *Astr. Nachr.* No. 2265, which indicates the necessity of these changes. An erroneous correction to the meridian of France was applied in forming the results published under the references given in my paper. The diagram on p. 156 should, of course, be altered accordingly.]

Page 163, footnote, second line, *for* 12 feet, or 0^s·01, *read* 20 feet, or 0^s·02.

[The numbers given in the text are correct, but a final correction was not extended to the footnote.]